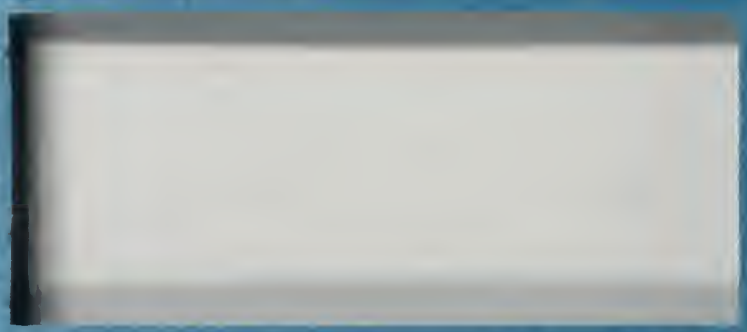
The Job Order Number:

Is Further Standardization Required?

Wesley A. Lokken



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Preface

The scope of this paper is confined to an analysis of the current JON structure in relation to the pressures for further standardization which are present in the developing Resource Management Systems of the Department of Defense and the Integrated Information Systems of the U. S. Marine Corps. The use of Automated Data Processing Equipment presents an opportunity through standardization and centralization of the financial management processes, which include the JON, to develop a comprehensive and beneficial information system for use by unit commanders through all reporting echelons. A furth standardized JON structure is an important part in the establis ment of the total information systems concept within the Marine Corps.

The writer gratefully acknowledges the materials made available throughout the preparation period for this paper by Headquarters, Marine Corps personnel and their demonstrated willingness to render constructive comments and criticism as requested. The views and opinions expressed are the writer's own, based on the information gathered, and are not intended to represent an official position of the Marine Corps, unless documentation is so included.

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INTRODUCTION

Expenditure authorizations issued by Headquarters Marine Corps, in the form of allotments, may be administratively controlled through the issuance and use of Job Orders. Each office or section, as authorized by the commander, will establish Job Orders to provide for the accomplishment of specific work, or to accumulate routine or recurring costs, within parameters of overall guidance provided by Headquarters. The Job Order Number (JON) is a procedure adapted for use in the task of accounting for the expenditure of public funds. The JON is an integral part of the cost accounting procedures utilized by the Marine Corps.

The JON is so designed that each expenditure is identified to the particular organization function to which it applies and by decoding the job order number provides full appropriation data.[1] The Job Order System is considered to be one of the most important financial management tools.[2] The Commandant does not now prescribe the type of numbering systems that are to be used by major stations, except that the JON'S will not exceed fourteen digits. In addition, the first three digits are prescribed by a Marine Corps Order that is issued annually, which consists of the fund code designators and applicable Fiscal Year notation.

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[1]U. S. Marine Corps, Financial Accounting Manual (FAM), MCO P3700.8A, 27 April, 1964, p 2-40.

[2]ibid.

Omnipresent over the decentralization of the JON structure is a requirement to submit status reports to Headquarters at designated intervals in an established format. These reports permit Headquarters personnel to aggregate data from all reporting units to satisfy the information and reporting requirements of the commandant and his staff. Inherant in the operation of the JON system is a loss of effective time due to the need to train and retrain fiscal/supply/maintenance personnel in the decentralized unit systems as a result of normal personnel rotation policies. The systems are varied sufficiently to necessitate a thorough orientation period for all personnel inputs. This orientation period results in a varying length of time which is lost prior to each individual becoming proficient in the system's operational procedures. As systems become more sophisticated through further use of automated processes, the loss period will increase in significance without a change to a more standardized system.

External to the operating JON system, today, are events which can materially affect its continued applicability as a cost accounting tool, unless it is updated accordingly through a modernization process. The Department of Defense's Resource Management Systems (RMS) and the Marine Corps' Integrated Information Systems (I^2S) will create a heavy impetus for more standardization in the JON structure and in its application at the using units. Both systems are

operationally predicated on the utilization of standardized processes and procedures to obtain information that is usable in the command decision making process, as well as to satisfy internal and external reporting requirements. RMS will, in addition, change some of the reporting requirements for the JON system. As the systems are being developed for use on Automated Data Processing Equipment (ADPE), they will necessarily function more effectively and efficiently when utilizing standardized input data for processing and evaluation at all reporting echelons.

The need for further standardization of the JON system then, is closely allied to pressures that are being brought about through changes in management theory and, also, in technological developments in ADPE as manifested in the machine oriented "Total Information Systems" concept. A quick review of some of the current discussion regarding expanding utilization of ADPE as it is carried over into the advancing systems of RMS and I^2S is found in Chapter 1. The financial accounting changes that are projected by RMS and I^2S, as they pertain to the continued use of the present JON system, are discussed in Chapter 2. These changes include the number of items that are to be accounted for, as well as changes in reporting categories, and for the utilization of aggregated JON reported cost information in future budget preparation procedures.

Chapter 3 presents a breakdown of the JON structure as it is established, defines the various types of JON classifications that are utilized, and presents an overview of how the proposed I^2S Financial Reporting System will handle the accounting data accumulated by the JON system in meeting informational requirements throughout the Marine Corps. A summary and conclusions are presented in Chapter 4.

A review of some appropriate terminology is felt necessary, since we are looking at a field that is growing rapidly. "Data" and "information" are terms that are often used interchangeably. The difference is small, but is appropriately delineated as follows:

> "In strict usage, information differs from data in its new value: information is that part of data that is of most interest to the data user."[1]

It is also apparent that there is confusion regarding the terms "program" and "information system". A program is a term which has evolved from the technician's dominating influence upon ADP systems and can be thought of as:

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[1] Ned Chapin, An Introduction to Automatic Computers, Princeton, New Jersey: D. Van Nostrand Company, Inc., 1963, p 476.

> "A plan for the automatic solution of a problem. A complete program includes plans for the transcription of data, coding for the processor, and plans for the absorption of the results into the system----the system being an organization, people, hardware, and procedures that operate together to perform a set of tasks.[1]

"Information System" is found to have closely the same meaning it is used by management oriented personnel:

> "The means, either manual or automated, of converting data elements into action and/or decision information including the forms, procedures, and processes which together provide an organized and interrelated means of recording, communication, processing, and presenting information relative to a definable function or activity."[2]

As information systems were being evaluated, interest began to be drawn to the aspect of obtaining specific information which management desired, rather than reading a neat printout of volumes of data which had been fed into and maintained by the machines. Changing to output oriented systems vice the initial input systems and the added stress and concern by managers in extracting only relevant items of information for inclusion in print-outs has led to the concept of the "Integrated Information System", or "Total Information System."

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[1]Robert H. Gregory and Richard L. Van Horn, Automatic Data Processing Systems, Belmont, California: Wadsworth Publishing Company, Inc., 1965, p 769.

[2]U. S. Marine Corps, Marine Corps Integrated Information System (I^2S), MCO 5200.10, 23 August, 1966 Enclosure 2.

"An achievement through systems design of an improved or broader capability by functionally and/or technically relating two or more information systems, or by incorporating a portion of the functional or technical elements of one information system into another. The functional aspect of information systems integration emphasizes combining or relating the purposes of two or more information systems; the technical aspects of information systems integration emphasizes the means of combining or relating the facilities, equipment, and/or data elements of two or more systems."[1]

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[1]U. S. Marine Corps, Marine Corps Integrated Information System (I^2S), HQO 5200.8, 6 October 1966, Enclosure 4, p 2.

CHAPTER I

CURRENT STANDARDIZATION PRESSURES

The advent of Automatic Data Processing Equipment (ADPE) has had a significant impact on each of our lives. Daily, more people are becoming aware of the capabilities of and the benefits that are derived from the utilization of ADPE. Concern is vocally expressed regarding the anticipated depth of change that Automatic Data Processing will ultimately have in our work environment, as well as the related effect it will have upon our leisure hours. Books and articles that explain developing applications of ADPE and their further influence upon us as individuals are avidly perused and discussed. Will the expanding adaptation of ADPE, in fact, create wide and sweeping changes in our day to day environment as depicted by the following excerpts?

> "While factory automation has already generated some large scale problems of change, we haven't really begun to feel the full impact of the new discoveries in computer technology and management science. The problems coming up will be concentrated at the managerial level. They will evolve from changes induced in organizations by the combination of computers and management science information technology."[1]

> "Thus, in effect, we think that the horizontal slice of the current organizational chart that we call middle management will break in two, with the larger portion shrinking and sinking into a more highly programmed state and the smaller portion proliferating

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[1]Thomas L. Whisler, The Manager and the Computer, The Journal of Accountancy, January, 1965, p 28.

and rising to a level where more creative thinking is needed. There seem to be signs that such a split is already occurring."[1]

"Information technology should make recentralization possible; it may also obviate other major reasons for decentralization. For example, speed and flexibility will be possible despite large size, and top executives will be less dependent on subordinates because there will be fewer "experience" and "judgement" areas in which the junior men have more working knowledge. In addition, more efficient information processing techniques can be expected to shorten radically the feedback loop that tests the accuracy or original observations and decisions."[2]

"With the working day reduced almost by half, there will be a further redirection of energies now absorbed in bustling activities. Because human nature remains stubbornly human, some of these salvaged hours will be idled away pointlessly, or otherwise misdirected. Yet the new approach will increasingly remove the ingrained notion that leisure means "time to kill". In its place will gradually come the custom, even the social compulsion, to spend the bonus of time for living on projects of personal and social benefits."[3]

The number and uses of computers and their associated families of software are constantly and rapidly expanding. ADPE is accepted as a means of accomplishing designated tasks throughout a broad spectrum of our changing environment.

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[1]Harold J. Leavitt and Thomas L. Whisler, Management in the 1980's, Harvard Business Review, November-December, 1958, p 45.

[2]ibid, p 43.

[3]David Sarnoff, The Social Impact of Computers, An Address given to the American Bankers Association New National Automation Conference, New York World's Fair, 16 July, 1964.

Volumes of data are processed by ADPE to derive information in a prescribed manner within a relevant time frame that is usable by managers to control the effectiveness and efficiency of their organizations. ADPE is also being tied together via communications media to moniter and aggregate the information gathering activities of a series of installations in order to effectively provide management with desired information when and where it is needed. The use of ADPE is becoming the norm rather than the exception as we look about us today.

> "Computers are now solid tools in space exploration, business, government, transportation, medicine, education and industry. On an everyday level, computers affect most peoples lives by writing bills, calculating pay checks and unsnarling traffic jams. Computers have their lighter sides too, and have been known to write poetry, compose music and play a wily game of chess."[1]

In an organization, the capability of obtaining and processing data in a short time frame is a prime requirement for the establishment of an effective, efficient decision making process by management. In order to make the best use of the capabilities of the computer, concident with the aims of sound management we find a movement underway to standardize the input data from the many functional areas that have been independently programmed within the organization. The standardized input data will tie together all of the operations of the organization and establish a common

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[1] "Computers Come of Age", Newsfront, August, 1964.

basis for developing sound decision making and accounting procedures, and evaluation and control techniques. Mr. L. C. Guest, has discussed this current trend towards total systems implementation in an article titled, "Meeting the Challenge of 'Info Systems'", where he states:

> "Computer systems are being intimately interwoven into the direct daily management decision making of the business. No longer is the computer real business world: it is becoming an integral part of that world, and it is in this context that we must learn to cope with it."[1]

The pressure for systems standardization is currently being felt in governmental departments and agencies. The provisions of the Budget and Accounting Procedures Act of 1950 and the recommendations of the Second Hoover Commission in 1955, laid groundwork from which Project PRIME, of the Department of Defense's Resource Management Systems is designed. The Budget and Accounting Procedures Act of 1950 (P. L. 784) places the responsibility for establishing and maintaining an adequate system of accounting and internal control directly upon the head of each executive agency. The systems, however, must conform to the principles, standards and related requirements for accounting prescribed by the Comptroller General of the United States. The Second Hoover Commission propounded that accounting systems which disclose

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[1]L. C. Guest, Jr., Meeting the Challenge of "Info Systems", Financial Executive, August, 1966, p 44.

all cost, whether funded or refunded, are the prime requisite to effective management and proposed a series of recommendations which have been incorporated within RMS. Applicable recommendations are listed below.

> "1. That the executive budget continue to be based on functions, activities, and projects but be redesignated as a "program budget". This program budget should be supported by information on program costs and accomplishments....
>
> "2. That agencies synchronize their organization structures, budget program classifications, and accounting systems....
>
> "3. That for Management purposes, cost based operating budgets be used to determine fund allocations....
>
> "4. That government accounts be kept on the accural basis to show currently, completely and clearly, all resources and liabilities and cost of operations....
>
> "5. That, as a general policy, reliance be placed upon appropriate accural and cost accounting techniques as a primary means for aiding the effective management of Government activities....
>
> "6. That in the Department of Defense accounting procedures be revised to include military pay as an element of cost...."[1]

In May of last year, a Presidential memorandum to all heads of departments and agencies was issued concerning a renewed joint program in the development of business-like

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[1]U. S. Commission on Organization of the Executive Branch of the Government, Budgeting and Accounting: A Report to The Congress, Government Printing Office, 1955, (Second Hoover Commission), pp 3ff.

financial systems throughout the Federal Government. Two of the items for which immediate action was requested by the departments and agencies were to:

> "1. Assure that financial reports and cost data provide adequate support for the planning-programming-budgeting systems.
>
> "2. See that the agency's managers are given the basic tools they need-responsibility centered cost based operating budgets and financial reports-for setting and achieving maximum cost reduction."[1]

Cost effectiveness analyses are being expanded and refined through the inclusion of standardized inputs as a strengthened procedure for determining the efficiency of planned military expenditures. There is increased reliance being placed on a systematic quantitative analysis to determine the most efficient alternative resource allocations within the military decision framework.

Working within the standardization requirements as established by DOD, the U. S. Marine Corps has developed MUMMS (Marine Corps Unified Material Management System). MUMMS incorporates fifteen major functional subsystems broadly covering the field of logistics, which are as follows:

> "Inventory Control; Stores Accounting; Automated Procurement; Mechanization of Warehousing and Shipment Processing (MOWASP); Direct Support

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[1]U. S, President, 1963- (Johnson). Memorandum to Heads of all Departments and Agencies, 24 May, 1966.

> Stock Control (DSCC); Technical Data Management; Applications; Provisioning; War Reserve; Depot Maintenance Management; Controlled Item Management; Budget Data; Special Programs; Supply Management Information; Allotment Accounting."[1]

The Inventory Controlled Points (ICP) and the Remote Storage Areas (RSA) are linked together through AUTODIN (Automatic Digital Network). MUMMS is also linked to the Defense Supply Agency and other service installations through AUTODIN. The subsystems are operated as one integrated unit with data in all of the subsystems available to the other subsystems for use in preparation of reports and documents.

> "One of the major objectives in the design of the system is to provide the capability for a military command to drop a punched card requisition into the communication terminal, and the data therein will be transferred electronically over to the ICP, processed through the computer, and the order for shipment automatically passed via AUTODIN to the subsystem at the RSA'S, where the requisitioned item is picked, packed and shipped."[2]

The workings of each subsystem will generate considerable data. To provide a central point for collection and processing of the data there is included within MUMMS, as shown above, the Supply Management Information Subsystem (SS16). Its purpose is possibly best described through a look at an excerpt of its concept.

> "A system of this magnitude (MUMMS) needs a focal point for collecting useful data from all of the subsystems and for collecting it into meaningful reports

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[1]U. S. Marine Corps, Marine Corps Unified Material Management System (MUMMS), MCO P4400.70, 28 June, 1966, para 0101.

[2]ibid, para 0101B.

> for management personnel. The Supply Management Information Subsystem is designed to fulfill this vital role within MUMMS. This subsystem will incorporate all of the processes necessary to support this centralized material management approach. Each subsystem design includes processes for generating prescribed output to this subsystem (SS16). All of this data will be collected in the SS16 data bank, from which it will be retrieved for integrated processing on schedule."[1]

This concept of joining functional systems together into one larger system for which common data elements are used for aggregating pertinent information is being extended within the Marine Corps through its developing Integrated Information Systems (I^2S). I^2S has as one of its primary objectives, "the provision of timely, accurate, and meaningful information to support commanders and staffs at all echelons for planning and command decisions."[2] Another illustrative look at I^2S is found below:

> "The I^2S is not communications, display or computer taken separately, nor is it oriented towards a single staff section. The I^2S is a composite, integrated, flexible combination of the information activities of the entire staff. The I^2S must always serve the needs of the entire staff because the staff supports the Commandant. It is imparative therefore, that the I^2S provide timely and accurate information to answer the What, When, Why, and How for the Commandant's decision making process."[3]

ADPE has given management a medium through which data can be processed and information communicated to the appropriate decision making echelons within the organization in a much

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[1]ibid, para 1401.

[2]U. S. Marine Corps, Marine Corps Integrated Information System (I^2S), MCO 5200.10, 23 August, 1966, para 1a.

[3]U. S. Marine Corps, Marine Corps Integrated Information System (I^2S), HQO 5200.8, 6 October, 1966, encl 1, para 2b.

much shortened time span. Because of this capability, ADPE has significantly altered the environmental conditions in which the Marine Corps operates and has resulted in an increased emphasis for "timely, accurate, and meaningful information. As envisioned, I^2S is to be a Marine Corps wide coordinated information gathering systems network which will be responsive to the resource control and reporting requirements throughout the Marine Corps and as directed by higher authority.

> "Continuing increases in the scope, complexity and tempo of operations in the Marine Corps have generated a need to have a flow of information supplied by functional area operating systems and integrated information systems of fields...The system requires the development of coordinated manual, mechanized and automated collection, transmission and processing procedures to translate data furnished by the Fleet Marine Force, the Supporting Establishment, the Organized Marine Corps Reserve and other appropriate sources into suitable relationships, formats, or displays to satisfy information requirements stated by the Commandant or higher authority."[1]

I^2S is being developed to provide information on Marine Corps activities ranging from peace to general war. The ability to transfer information throughout the various functional systems such as MUMMS, that are included in I^2S, is largely predicated on the use of ADPE and a consistent, standardized, adaptable data structure that can be used by all input activities.

> "Information and data systems will be supported by centralized files, when practicable, that serve as a common data base for multiple use.
>
> "Information and data systems are not to be regarded as the exclusive property of a single command

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[1]U. S. Marine Corps, Marine Corps Integrated Information System (I^2S), MCO 5200.10, 23 August, 1966, para 2b.

> or function but will be designed to cross command and functional lines when the best operational performance can be attained and when mutuality of interest or common need require.
>
> "Information and data systems will provide for early conversion of data into automated forms (source data information) and, when appropriate, channeling data direct from source to processing point.
>
> "Information and data systems will provide for the use of existing or planned telecommunications facilities as appropriate."[1]

In addition to the standardization requirements manifested in I²S, the external requirements being established by RMS are themselves demonstrating a need for common standardized systems and procedures.

> "Resources Management Systems can be defined as those methods and procedures used throughout the Department of Defense that (1) deal with resources (manpower, real property, weapons, equipment, services, materials, and supplies), (2) are intended to assist in the management of such resources (planning, budgeting, acquisition, use, consumption, storage, and disposition), and (3) constitute systems (they involve recurring, orderly cycles of planning, reporting, and feedback information). Resource Management Systems affect the entire management process in the Department of Defense."[2]

The Management processes that are being advanced through RMS and I²S resolve into accounting for the expenditure of resources, i. e., financial cost of men, materials, and money. "In order to carry out a program, it is indeed necessary to have that program supported by the budget. No matter what anyone says, money talks."[3] The planning, programming,

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[1]U. S. Marine Corps, Marine Corps integrated Information System (I²S), HQO 5200.8, 6 October 1966, encl 1, para 3c ff.

[2]Department of Defense, A Primer on Project PRIME, November, 1966, p 7.

[3]U. S. Marine Corps Institute, Budget Formulation and Execution, MCI 34.6b1, 2 July, 1965, p 1-3.

budgeting and appraisal processes are being interfaced into the overall mission operation of the organization in a continuous chain of activities. (See following page for a schematic of DOD'S Management Process). "Planning and programming without determining the funds required and the probability of obtaining these funds come just as much under the heading of wishful thinking as does the teenager's dream of a new Cadillac."[1] The use of financial accounting operations throughout the management process is expanding. As the JON is an instrument used in the accounting for, and monitering of the expenses incurred in accomplishing assigned tasks, its role in providing information for use in the management process will enlarge.

The specific area within these systems upon which we will focus our attention is the accounting for resources that are allocated in accordance with approved budgets. With continuing emphasis on the effective utilization of resources, there evolves a need for standard based common cost information that will provide an accurate input for cost effectiveness analysis and for management control evaluation. The reporting requirements of RMS and I^2S will permit the utilization of a significant amount of common information, and in some instances will demand it, as we shall observe a little later.

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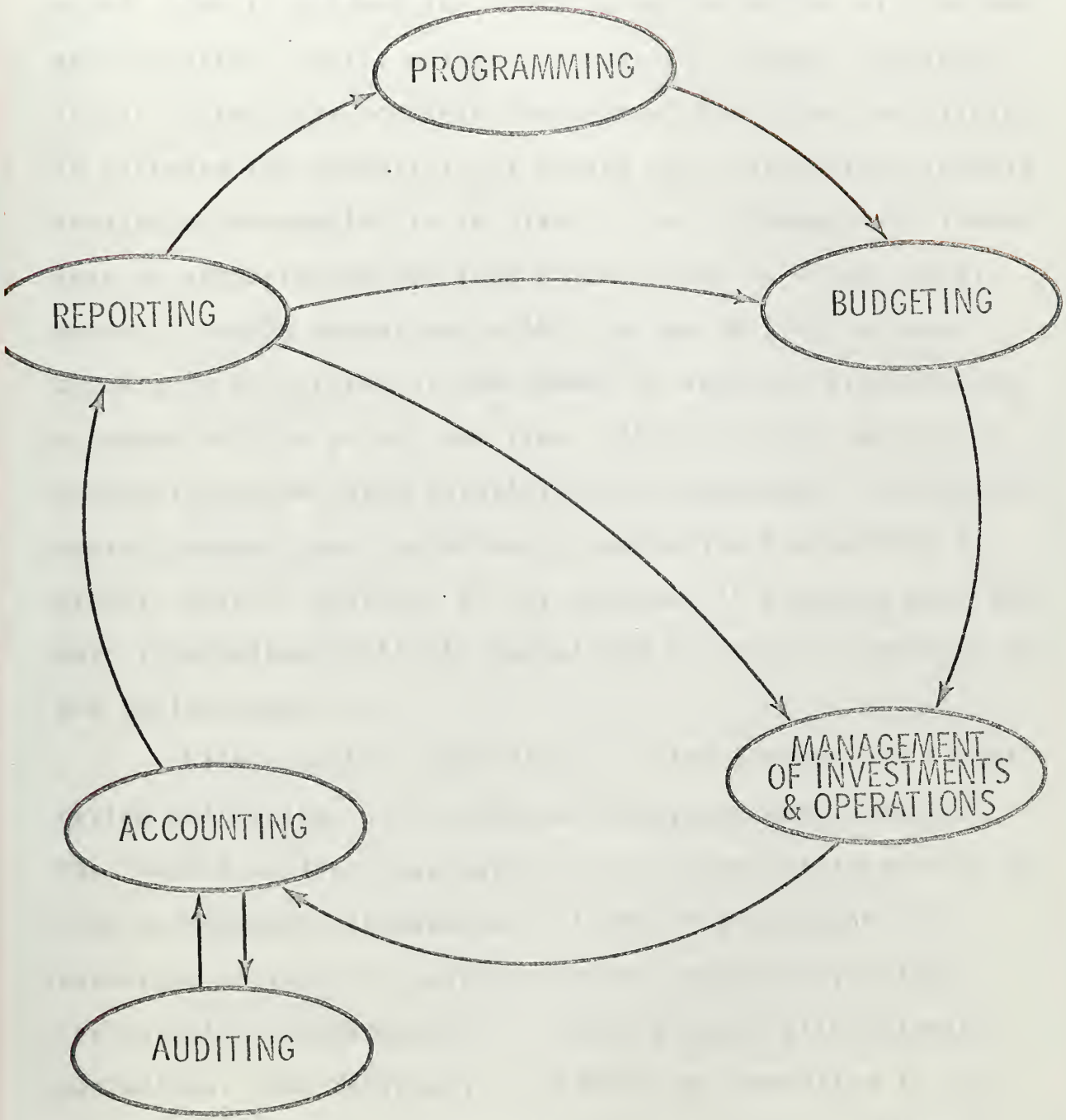
[1] ibid, 1-2.

DOD MANAGEMENT PROCESS[1]



[1]Department of Defense, A Primer on Project PRIME, November, 1966, p 8.

CHAPTER II

IMPLICATIONS OF RMS AND I^2S

Marine Corps Management Personnel today need quicker access time to information relating to the status of programs, appropriation levels, obligation balances, combat readiness, supply status, the complete spectrum of functional activities. To increase the capability of having this information readily available and usable, is to place it in a standardized format into an automated system from which it may be withdrawn as needed. People cannot match ADPE in the ability to keep current on the status of the number of separate projects and programs working at any one time. ADPE with the ability to correctly retain large quantities of information, to maintain current status, and inclusively, processing the ability to process data in relation to set programs is becoming more and more interrelated with the budget and accounting functions of the Marine Corps.

Within a short span of years, the program and budget review methodology within DOD has undergone marked change. The "budget ceiling" approach that had been utilized prior to 1961 was adjudged inadequate in light of the amount of resources assigned to defense and the rapidly advancing technological developments in fields aligned with defense activities. The Secretary of Defense was compelled to cut and squeeze the service budgets within a "budget ceiling"

imposed by the Bureau of the Budget. Such cuts on a vertical service by service basis resulted in unbalanced programs that could not be referenced to composite defense plans.

The "budget ceiling" approach did not promote effectiveness nor efficiency in its operation. Charles Hitch has stated, "its consequences were precisely what could have been predicted".

> "1. Each service tended to exercise its own priorities:
>
> a. favoring its own unique missions to the detriment of joint missions:
>
> b. striving to lay the ground work for an increased share of the budget in future years by concentrating on alluring new weapon systems; and
>
> c. protecting the over-all size of its own forces even at the cost of readiness....
>
> "2. Because attention was focused on only the next fiscal year, the services had every incentive to propose large numbers of new starts, the full cost dimensions of which would only become apparent in subsequent years....
>
> "3. Almost complete separation between budgeting and military planning:
>
> a. these critically important functions were performed by two different groups of people....
>
> b. budget control was exercised by the Secretary of Defense, but planning remained essentially in the services....
>
> c. whereas the planning horizon extended four or more years into the future, the budget was projected only one year ahead....
>
> d. planning was done in terms of.... outputs: budgeting.... in terms of inputs....
>
> e. budgeting, however crudely, faced up to fiscal realities; the planning was fiscally unrealistic, and therefore, of little help to the decision-maker....
>
> f. military requirements tended to be

stated in absolute terms, without reference to their costs."[1]

The Programming system which followed gave rise to the cost effectiveness analysis as a procedure to compare alternative methods for solving defense problems. Cost effectiveness analysis permitted a rational framework from which to assign to the services portions of the total defense posture. Due to the fact that the national resources are not unlimited, the total resources available for the defense of the nation are further constricted within the framework of the economy. A procedure was then advanced to arrive at decisions on alternatives established within the resource capability available for defense use; that procedure was cost effectiveness. The cost effectiveness approach was a large step towards the development of project PRIME.

Project PRIME, that portion of RMS to be accomplished by 1 July, 1967, is designated as a system to assist managers in obtaining the volume and timing of information needed for the decision process. The impact of the changes to be effected by Project PRIME can be described in short as:

> "1. Project PRIME is concerned with operating resources, as contrasted with investment resources.
>
> "2. Programming, budgeting, and management accounting will have an integrated structure. This means that the information used in these three systems will be consistent.

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[1]Charles J. Hitch, Decision Making for Defense, Berkley: 1965, pp. 24-26.

> "3. The focus is on expenses, that is, on the resources consumed by organization units in carrying out their part of the program. The Programming system provides rough data on expenses by program element, but the present budgeting and accounting systems provide no information corresponding directly to program elements. In the current budgeting and accounting systems, perhaps only 15% to 20% of the resources actually used by an organization are reported as costs of that organization. The long-range goal is to charge an organization with 100% of the measurable expenses that it occurs."[1]

I^2S abets the precepts established for Project PRIME, as it is being developed for commanders, "to assist the commander and his staff to analyse information and grasp the situation at an accelerated rate, thereby speeding command decision and control. It permits the commander to act, rather than react, as the system will approach real-time operation. The performance of the system is characterized by speed of information handling, processing, and accuracy in operation."[2]

RMS and I^2S are complementary systems in their application to management operations; being directed at the effective, efficient management of available resources. To evaluate managers on their use of resources effectively requires a uniform procedure, including such segments as standard cost data, accounting and budget formulation procedures. The philosophy of the developing systems becomes

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[1]Department of Defense, A Primer on Project PRIME, November, 1966, pp 13-14.

[2]U. S. Marine Corps, Marine Corps Integrated Information System (I^2S), MCO 5200.10, 23 August, 1966, encl 1, para 2.

workable and manageable through the availability of ADPE and their manifest capabilities to accept the voluminous inputs which are to be generated, process this volume of data within established program constraints, and print out or transmit the necessary information in a prescribed manner within a minimum time period.

The systems are directed to commanders, for he who commands must also manage--manage his organization and its operations within the constraints of resources available to him.

> "a. Financial management is the administrative control over the resources with which the commander will accomplish his mission.
>
> "b. Financial management has no bearing on the determination of the commander's mission, but will be a primary consideration in determining both the means and time-phasing of its accomplishments.
>
> "c. Quantitative and/or qualitative adjustment may be required in the commander's mission as the result of financial (fund) limitations."[1]

The responsibility of command will continue to be the accomplishment of the organization's mission, however, emphasis will increasingly be placed on the amount of resources consumed in accomplishing the assigned mission. The procedure used to aggregate the costs of the resources utilized is the JON, as an adjunct to established accounting procedures.

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[1]U. S. Marine Corps, Marine Corps Commanders and Financial Management Manual, MCO P7300.9A, 1 February 1965, p 5.

The result of the functioning of RMS and I^2S will be to provide operating managers with more clearly defined goals, a positive procedure to measure and check on how well the goals are being met, and also, a procedure whereby a manager can evaluate himself and be evaluated on the effective use of the resources made available to him. With the capability to moniter his own effectiveness, the manager is expected to be positively motivated to exercise good management principles in the execution of assigned missions. Of strong influence on the manager will be the ever present budget within which he must operate and the methods of accounting used to accumulate the expenditures from the available resources as they are incurred.

As our analysis is to remain within the financial accounting aspects of RMS and I^2S, as they influence the need for a further standardized JON, we should also remind ourselves of the interface between the planning, programming, budgeting and appraisal processes. Programming and planning are being carried on continuously in anticipation of future requirements. Budgeting is the cyclical, single year segment of those plans and programs, changing costs into appropriations format for the annual budget request. Also, on a continuing basis is the appraisal process, "the timely and impartial analysis of all essential information in order to evaluate the progress, effectiveness, efficiency, and balance

of the total effort."[1] Taken together, the functions of planning, programming, budgeting and appraisal:

> "a. Are performed in varying degrees at all levels of command.
>
> "b. Have a definite sequential interrelationship although they are all dynamic and therefore are performed concurrently and continually.
>
> "c. Must be responsive to the needs of internal management and the requirements of external agencies.
>
> "d. Generate and sustain a family of studies, plans, programs and budgets that are mutually supporting and share a common stream of data that can be traced from one document to another.
>
> "e. May involve computer applications and utilization of data processing equipment at higher levels of command."[2]

The establishment of the programming process to precede budget formulation has bridged the gap between planning and budgeting. Thus, by linking planning and budgeting in a unified planning, programming, budgeting decision-making process, it was possible to produce a single DOD look at future requirements, the "Five Year Defense Program."

> "The program projects not only the military forces needed to meet the requirements of our long-range military plans but also the personnel, equipment, supplies and installations to support them.

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[1]U. S. Marine Corps, Manual for Planning and Programming, HQO P3121.2, January, 1965, para 1004.2.

[2]ibid, para 1000.3.

> In addition, the program projects the full costs of these resources, thereby permitting responsible decision-makers to assure themselves that the program they are planning is financially feasible and attainable and is providing a sound basis for the development of our annual budget requests to Congress."[1]

Ideally, with the planning, programming, budgeting system, it should be possible to utilize the first year of the five year plan for budget formulation. Essentially, there are two reasons why this cannot be done. Initially, the review process is necessary to bring the cost data into line item relationships and bring the program within the budgetary guidelines received by DOD. Secondly, the programs are not stated in appropriation terminology. The budget, then, translates the objectives set forth in program terminolog in the Five Year Defense Program into the financial accounts prescribed by law.

The annual budget will continue to be the means of obtaining funds to implement programs, or another way of looking at it is, the approved guidelines for the expenditures of the funds appropriated for that program. Budgeting emphasis will change from a compilation of dollar amounts

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[1]Bert Mogin, Director, Financial Management Education and Information, Office of the Assistant Secretary of Defense, (Comptroller), in an address to the students of the Navy Graduate Financial Management Program, The George Washington University, 2 November, 1966.

within functional categories (Marine Corps Personnel) to the application of appropriation costs within the program/budget/account structure (Marine Corps personnel costs applicable to a specific program). The budget will change to explicitly show the relationship between resources shown in the budgets and military missions. Budgetary activity will, however, remain cyclical, concerned with single year segments of the planning and programming functions.

The Responsibility Center's budget requests, which are forwarded for review and approval are expected under the developing systems to more closely approximate the actual costs that can be foreseen through planning and programming. The projected costs, which the responsibility center will use in preparing its Expense Operating Budgets (EOB'S), are to be taken from current and past records corrected for any known changes that will affect the costs during the operating cycle. These cost inputs will be taken from information aggregated by the financial accounting system utilizing JON'S as a primary source of input data. "Since recorded fiscal accounting data provides the principal basis for arriving at sound estimates of funds required for future performance, the importance of accurate fiscal records and reports and realistic estimates is obvious."[1]

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[1]U. S. Marine Corps Institute, Budget Formulation and Execution, MCI 34.6b1, 2 July, 1965, p 1-6.

The expense budgets are anticipated tomake it easier to estimate requirements, and to justify the requirements in a rational manner. The previous budgets being slanted towards inputs (Military Personnel, fuel, TDY, etc.), did not match up with actual outputs. It therefore was difficult to establish what was proposed against what the proposal was to cost. Under the new expense oriented budget system, the difficulty in determining the expected results and corresponding, anticipated costs should be eased for all levels--from field installations to the secretarial level.

Below the program element level, uniform functional classifications will be used in order to plan for the utilization of resources for a specific project, and moniter the effectiveness of the use of these resources in the same manner; largely budget review and analysis of planned costs as against actual costs.

> "This is a major change in the system, a uniform account structure will facilitate consistency among the program, budget and accounting systems. Resources can be planned for certain purposes, distributed according to those same purposes, and their use measured in exactly the same terms. This structure will be employed for both preparation and execution of operating budgets."[1]

Changes to be instituted in accounting structure and procedures will also have an impact on budgeting, for budgeting and accounting are an integral part of effective financial control and of efficient management.

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[1]Department of Defense, A Primer on Project PRIME, November, 1966, p 43.

> "Budgeting and accounting data form essential elements and probably the most important elements of the general system of data required by officials at all levels of government from program and activity supervisors, to ministers at the apex of decision making within the nation."[1]

Prior to FY-1953, the responsibility for the financial management of the Marine Corps was carried on at the Headquarters, Marine Corps level in both budget and accounting aspects. Beginning with July, 1964, however, the military services were required not only to prepare, present and justify budget estimates, but also, to establish and administer specific programs to account for and report on the cost and performance of identifiable function programs and activities--Performance budgeting. In FY-1955 a program of decentralization of financial management was put into effect. Included in the plan was provisions for the allotting of funds to field commanders, and provision for their active participation in the budgeting of the funds. Other reasons for the decentralization of financial management in the Marine Corps at that time were:

> "a. To give the commanders financial control comparable to their control in other areas of responsibility.
>
> "b. To develop cost consciousness in all personnel; that is, a more thorough realization of the dollar value of material being consumed and services being procurred.
>
> "c. To make available to field commands

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[1]E. Reece Harrill, A Unified System of Governmental Accounts, The Federal Accountant, Winter, 1964, p 5.

and more realistic and accurate data for budget purposes.

"d. To provide the Commandant of the Marine Corps with a method whereby he may insure more efficient use of the resources made available to the Marine Corps."[1]

As a result of decentralization of the financial management function, procedural differences in determining and accounting for costs developed at the field commands. The advent of computers and their growing utilization in the financial field highlighted the differences, and caused internal revisions within the systems--turned them towards more uniformity.

The intent of accounting is being changed because of the standardization programs. Accounting procedures are being formulated to shift towards aggregate expense accounting in relation to approved programs instead of accounting for the source, application and status of appropriated funds.

"With the existing accounting systems, the total cost of a program,--in the terms in which program decisions are made--or the total cost of managed organization can, at best only be estimated."[2]

To be able to evaluate performance to plans also brings impetus to change to an expense accounting system.

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[1]Marine Corps Institute, Budget Formulation and Execution, MCI 34.6b1, 2 July, 1965, para 1-3.

[2]Department of Defense, A Primer on Project PRIME, November, 1966, p 49.

The Honorable Robert N. Anthony, Assistant Secretary of Defense (Comptroller), in an address at the 1966 Navy Supply Conference presented reasons for changing to expense accounting within DOD as follows:

> "In order to obtain congruence between the goals of the manager and those of the whole organization, we must be able to compare performance to plan, and resources consumed to work done. Obligation accounting gives us neither of these relationships. Therefore we must shift to expense accounting."[1]

To achieve this desired congruence, accounting procedures will be changed in four major ways.

> "1. Costs of military personnel will now be charged to the programs and units where the personnel work.
>
> "2. Appropriations are being purified so that only expense items are associated with the operation appropriations, and only investment items with the Procurement and Military Construction appropriations.
>
> "3. Working capital funds, which hold assets in suspense from the time they are ordered until they are received by the final user, are being extended, so that operating expense accounts reflects only the expense of the items consumed, and not the cost of items acquired but not yet consumed. Working capital accounts are being established for locally procured contractural services.
>
> "4. A uniform expense account structure is being prescribed so that accounting information is collected in ways that are useful to the operating

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[1]The Honorable Robert N. Anthony, in an address given at the 1966 Navy Supply Conference, Harrisburgh, Pennsylvania, 4 May, 1966.

manager and also are consistent with the information needed for programming and budgeting."[1]

The biggest single element brought under the new budgeting and accounting procedures is the costing of military personnel by units. Military personnel, M. C., in the FY-65 budget accounted for 66.1% of the total budget. See chart on following page. Due to this requirement, military personnel costs become a factor in the aggregation of costs applicable to any Job Order to which they are assigned. The JON system must be adapted to allow inclusion of this added cost in order to correctly account for the total required Job Order Costs. DOD has established a structure of applicable cost accounts in accordance with the functional or sub-functional categories applicable to RMS. See Appendixes I, II, and III.

All services provided by Military Personnel to a mission organization must be budgeted for, and will be charged to the unit. All military personnel, with the exception of combat units, must be charged to a program, project and/or function in accordance with performance of duties. For combat units, total accumulated standard costs in aggregate by organizational units will be utilized in the accounting process. Other significant changes are the shift in emphasis from obligation to expense accounting, the

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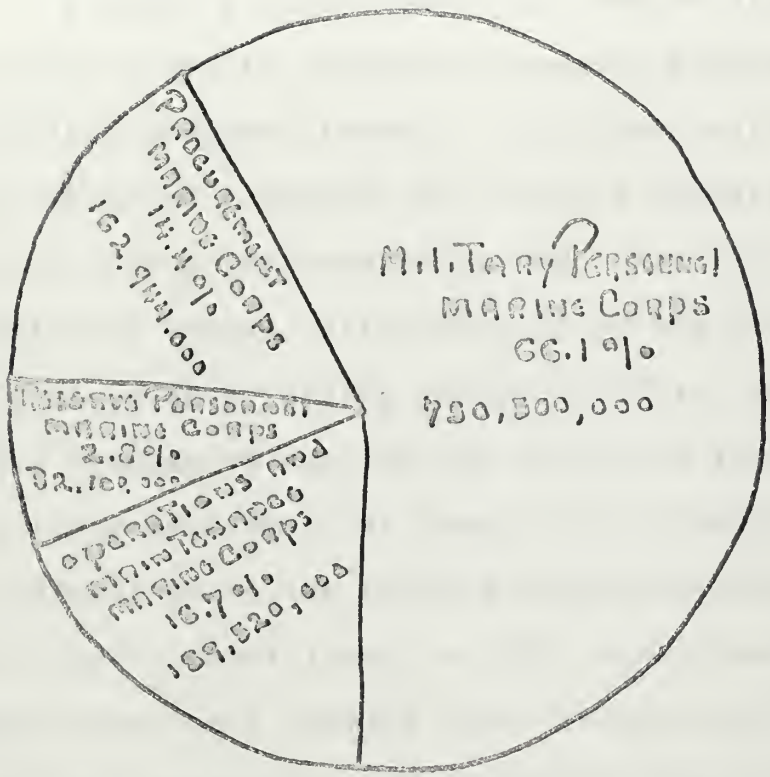
[1]Department of Defense, A Primer on Project PRIME, November, 1966, pp. 50-51.



FY 1965 Marine Corps Budget[1]

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[1]Marine Corps Institute, Budget Formulation and Execution, MCI 34.6b1, 2 July, 1965, p 2-2.

realignment of which costs are expenses vice investment costs, and the use of Working Capital will be expanded, holding assets in suspense until consumed.

To provide a common basis for the military departments and agencies to use in reporting expenses by operating expense, budget entity, program elements, functional activities, and types of resources consumed, the uniform expense accounting structure is being implemented by DOD. The requirements covers only the expense data required by the Office of the Secretary of Defense, giving to each Military Department and agency the freedom to amplify the structure to meet its specific management needs as long as the subsystems created permit aggregation to the uniform expense structure. The expense accounts themselves, in other words, must be structured to be consistent on a summary basis between services, and also with the programming and budgeting phases of the overall system.

How then does a further standardized JON fit into this changing picture? It is needed to enable managers at all echelons to feed information into the integrated systems which is compatible: information which can be accumulated by the machines, massaged, stored, and obtained when needed to determine program status; to ascertain appropriation balances, to enable the echelon of command or management responsible for a program or appropriation to moniter the

developments for his own requirements, and to be able to respond to queries from higher authority in regard to current status in a minimum of elapsed time.

CHAPTER III

NEW REQUIREMENTS FOR JON

The Department of Defense has prescribed, in conjunction with RMS, collection of expenses by functional categories, that is, classifying expenditures by their specific purpose. The prescribed functional categories do not encompass the full spectrum of Navy and Marine Corps management information requirements. Additional accounts have been developed to supplement the functional accounts and are called sub-functional categories. For illustration, a summarized breakdown of the assigned functional categories and the sub-functional category codes applicable to functional category D are included as exhibits 1 and 2 beginning on page 61. The functional categories are designed to collect expense information for one or more of the following reasons:

> "1. The cost of the function is required to meet restrictions made by the Congress or to meet the needs of outside parties.
>
> "2. Information on the cost of a function is useful in deciding on the authorization to be provided to an operating activity.
>
> "3. The cost of the function provides a control total tied to an underlying cost accounting system needed for management of the function; and
>
> "4. The cost of the function is useful in making comparisons and special analysis of cost."[1]

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[1]U. S. Department of the Navy, Financial Management of Resources, NAVSO p-3006, p 2-31.

To accumulate the costs relating to a functional or sub-functional category that are required for detailed analysis, specific cost accounts have been designated. Those sub-functional categories not requiring any analysis of cost are assigned to a general account, cost account code 1111.[1] The cost accounts applicable to sub-function D-1 are included as Appendix III in order to show their derivation.

To provide continuity to the cost accumulation process and conjuncturally, the budgetary process responsibility centers will be established. A responsibility center is an organizational unit headed by an officer or supervisor who is responsible for the management of resources in the unit, and who in most instances can significantly influence the expenses incurred in the unit.[2] Parts of a responsibility center are cost centers and sub-cost centers, organizational entities "for which identification of costs is desires and which is amenable to cost control through one responsibility supervisor."[3] Specifically, a cost center will be the major departments of a responsibility center, such as the Comptroller Department or Administrative Department and the sub-cost center is to be a branch or section of the Department. Sub-cost centers are used within a cost center to identify specific organizational segments for which separate reporting is

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[1]ibid, p 2-43.

[2]ibid, p 1-5.

[3]ibid, p 1-4.

required either to facilitate control of costs or to accumulate information needed for reporting purposes.[1]

> "Each expense identified to a functional category, subfunctional category cost center, and sub-cost center will also be identified to a specific expense element."[2] (See Appendix IV).

Such expense elements will permit the accumulation of dollar amounts identifiable with the specific posting of the job cost and provide a base for comparison against budgeted fund allocations.

As previously established, budgets for future periods will be expense oriented budgets, or Expense Operating Budgets (EOB). Integral to the financial accounting for an EOB is the JON and the Job Order Record used to record all charges to the JON Order.

> "Activities accounting for expense operating budgets will develop a job structure to provide for the accumulation of accrued costs. The term "job order structure" will include any assignment of codes for the purpose of accumulating and posting accounting information. A Navy-wide job order structure will not be prescribed because of the variation of requirements; however, the locally prescribed structure must be designed to produce accrued costs at the cost center level and the sub-cost center level. The job order structure must be so designed that other required cost reporting requirements can be obtained where required. In addition, the job order structure must also provide details by functional category, subfunctional category, and expense element when such information is not derived by other methods."[3]

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[1] ibid, p 2-94.

[2] ibid, p 2-95.

[3] ibid, p 4-5.

The Marine Corps Financial Accounting System is designed to provide procedures in compliance with statutory requirements, DOD regulations, and the Commandants requirements for administrative control of appropriated funds. The accounting system is designed also to meet the objective of establishing uniform records and enabling the preparation of standard fiscal reports by all activities.

> "As the budget and accounting structure is designed along functional lines, it is important that all costs be properly classified into and accurately recorded against the applicable budget projects, within the proper allotments and against end use functional accounts."[1]

The reports generated by the accounting system are to provide information to the Commandant and Commanders in the field necessary to:

> "a. Insure that purchases and expenditures of public property and receipts and expenditures of public funds are legal and according to prescribed regulations:
>
> "b. Provide a system of budgetary control of expenditures:
>
> "c. Provide for local control of allotments and fix the responsibility for any over-expenditures of allotments:
>
> "d. Furnish information concerning the financial operation of the Marine Corps: and
>
> "e. Furnish information necessary for budget estimates."[2]

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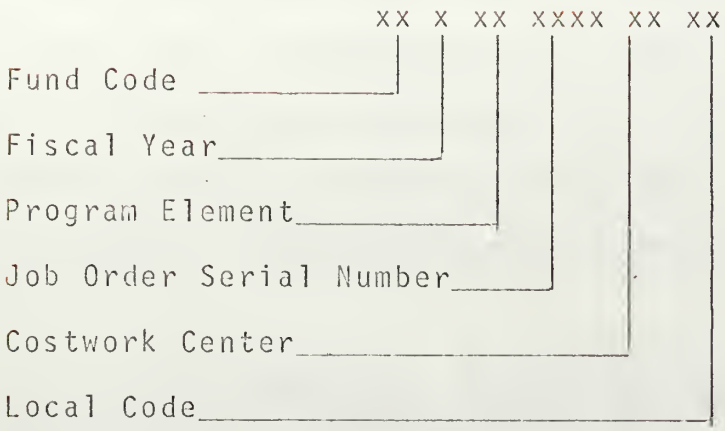
[1]U. S. Marine Corps, Financial Accounting Manual (FAM) MCO p 7300.8A, 27 April, 1964, p 1-4.

[2]ibid, p 2-23.

To accomplish the aims of the financial accounting system a standard job order structure consisting of fourteen digits was adopted for use by activities of the Marine Corps. The standardized job order structure established uniformity within cost accumulation procedures, and yet, permitted the subordinate commanders maximum flexibility to control his own organizational requirements as the operational and environmental situation dictated. At the major ground activities, the use of the standard JON is designed around a fourteen digit alpha-numeric designator which represents, in coded format, significant accounting data. The first three digits are now standardized, being directed and published by Headquarters, Marine Corps annually. The remaining eleven digits are prescribed for use by designated commanders for accujulating internal/external accounting data applicable to their own organizations, with certain limitations. The limitations placed on the eleven digits are that they will be broken down into specific fields as directed by Headquarters, Marine Corps, as follows:

1. Program element, digits four and five.
2. Job Order Serial Number, digits six through ten.
3. Cost Work Center, digits eleven and twelve.
4. Local Code, digits thirteen and fourteen.

Graphically, the JON appears as shown below:



The Fund Code is assigned by Headquarters, Marine Corps and is used toidentify; appropriation, subhead, Bureau Control Number, and authorization accounting activity number.[1] As an example, for Fiscal Year 1967, the Fund Code NR encompasses the following data; appropriation and subhead number 17x4913, BCN 26408, and AAAN 67001, the activity represented is Marine Corps Base, Camp LeJeune, North Carolina.[2] The Fiscal Year is represented by the last digit of the Fiscal Year, i. e., 8 representing FY-68.

Job Orders are now used primarily for the purpose of specifying what work is to be done, and when it is to be accomplished. Its secondary purpose is to provide for the accumulation of costs at or below the functional account

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[1]U. S. Marine Corps Fund Codes For Fiscal Year 1967, 14 September, 1966, p 2.

[2]ibid, encl 1, p 6.

classification level. As authorized by the commander, Job Orders are established by each office or section for the purpose stated above. Depending on the type of job to be performed the JON may be termed specific, or standing, and in conjunction with the two types, either open or closed, active or inactive: Appropriate definitions are given below:

> "a. Specific. A job order issued to provide for the accomplishment of a specified job or parcel of work, and for which a summarization of all costs incurred in connection therewith is desired upon completion of such work is to be identified as a specific job order.
>
> "b. Standing. A job order issued to provide for the performance of work or the furnishing of services, as required, during a specified period, usually a fiscal year, in connection with the routine and recurring maintenance and operation of an activity, is to be identified as a Standing Job Order.... Costs will be reported periodically as required.
>
> "c. Classification by Status. Job orders at Marine Corps activities are classified as wither open or closed. An open job order is one which has to be issued and could continue to be charged. It will remain open until the work is completed or decision is made to do no work thereon or to transfer the work to another activity. Open job orders may be further classified into active (available for incurring charges) or inactive (not available for incurring charges because it has been directed that the work be postponed or stopped)."[1]

As required for reporting or control operations cost aggregation for job order can be accumulated and posted to

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[1]U. S. Marine Corps, Financial Accounting Manual (FAM), MCO p 7300.8A, 27 April, 1964, p 2-34.

the job order form. Specific job orders are closed upon notification by proper authority. Standing job orders are usually closed at the end of each fiscal year.

The JON is then a cost accounting procedure, utilized to provide a record of costs for the local command use, which will provide relevant figures that can be used in preparing budget estimates. To assist in this operation, EAM and ADPE equipment are being utilized and the accounting data is established within a station-wide JON system. By decoding the JON the full appropriation accounting data is provided.

The systems as established by the major commands are not compatible for inclusion into a standardized system. Sufficient differences are characteristic to the separate commands to make it difficult to derive a standardized code that would be applicable, without exception, to each of the reporting units. In order to continue to allow commanders the flexibility needed to resolve problems characteristic of their units it becomes necessary to establish exactly what amount of information is required by the reporting requirements of higher authority, and standardize only that amount within the constraints of the reporting channels that will be in use.

How much data is to be required by I^2S and RMS? In the rapidly changing and evolving systems this is not a question resolved with absolute certainty. To be satisfactory, however, a standardized JON should be able to provide all of the information needs for the internal functioning of the Marine Corps Financial Management Systems, and also, to

satisfy the Marine Corps reporting requirements externally.

The requirements of the different levels of reporting will not necessarily be the same, and almost assuredly will not be for the higher reporting levels. The installation commanders will need to have pertinent cost data for effectiveness, efficiency determinations within their commands, while the higher echelons may need only the aggregate costs along program or program element lines. To be efficient, only the necessary cost data must be handled at each level in the reporting chain.

Internally within the Marine Corps the financial system will recognize three internal systems and their interrelationships. They are:

"(a) Base Fiscal Systems.

"(b) Functional Fiscal Systems.

"(c) I^2S."[1]

The interrelationships between the systems is shown by the diagram on the following page.

The base fiscal systems are proposed to ultimately produce financial information automated to the greatest extent possible for the functional system. It is envisioned that the total inputs to the functional system will be in a

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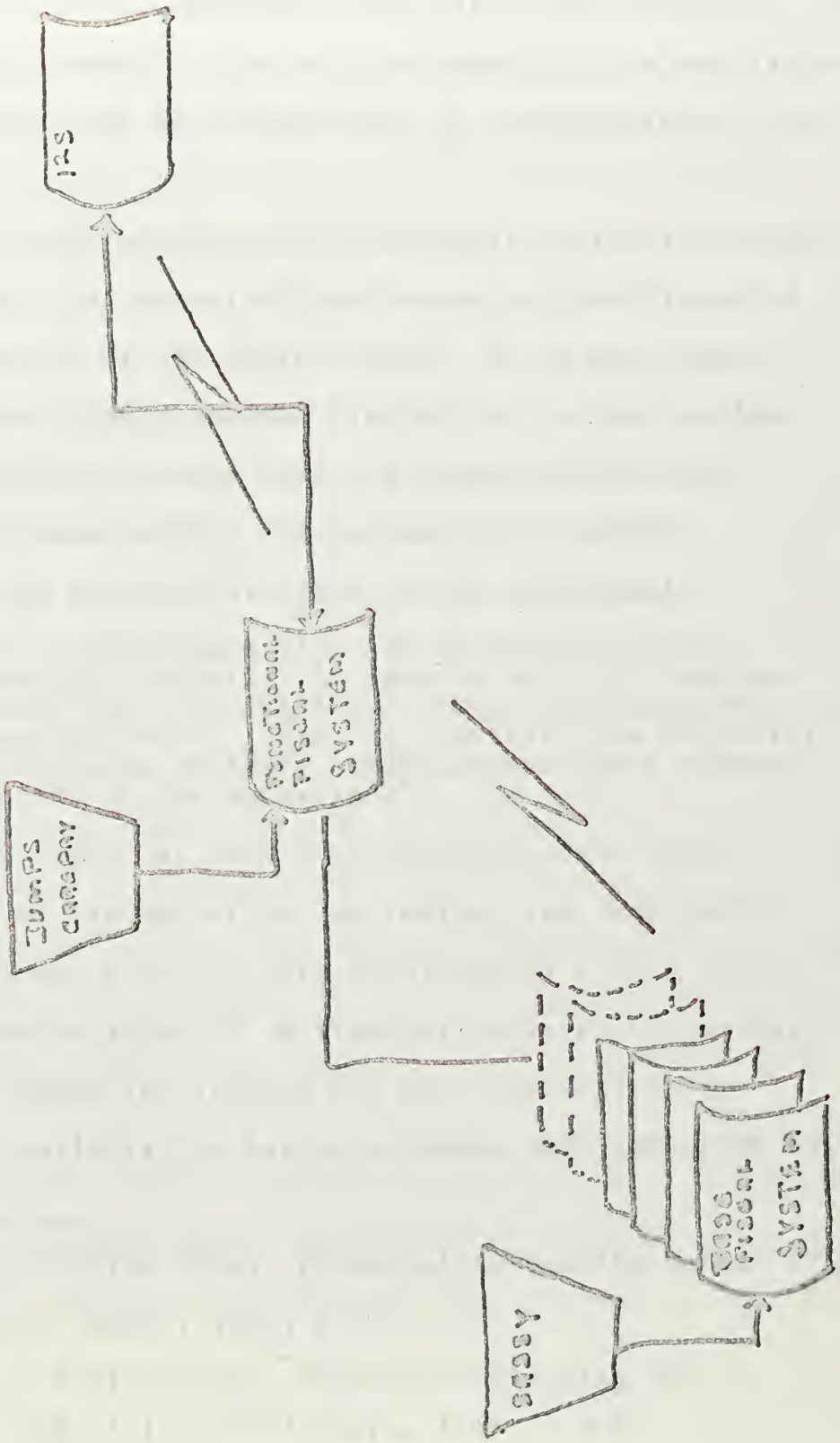
[1]Headquarters, U. S. Marine Corps, Proposed Charter for Financial, March, 1967, p 1.

SCHEMATIC OF THE IRS (FINANCIAL)



completely automated form. From the data in storage within the functional system, summary data as required will be extracted and placed within I^2S to satisfy the reporting requirements of the Commandant, his staff, and external reporting requirements. The machine capability is available to handle the volume of transactions to be generated by the system.

To further standardize the JON may initially appear to be at odds with the established decentralized financial management policy of the Marine Corps. As we have seen, commanders are allowed maximum flexibility in the development of accounting systems that are responsive to their organizations needs within the parameters of general regulations and policies directed by the Commandant.

> "Commanders will not be given a rigid (financial) organization pattern nor will they be directed how they shall carry out their assigned responsibilities. There is, however, the necessity for inclusion in their organizations those elements essential to its operations"[1]

In addition, we find that appropriations sponsors are responsible for "accumulating, reviewing, and reducing to prescribed format all cost data requirements within their sponsored appropriation."[2] A trade-off between the policy of command freedom for setting its own financial data accumulation policies, or having a common data gathering base

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[1]U. S. Marine Corps, Financial Accounting Manual (FAM), MCO P7300.8A, 27 April, 1964, p 1-3.

[2]U. S. Marine Corps, Manual for Planning and Programming, HQO 3121.2, 29 January, 1965, p 9-9.

must be considered in view of the advancing systems. Is the authority to establish cost accumulation procedures a significant item of command prerogative in that the reporting formats for which the information is also gathered are directed? I think not. The gains that can be accomplished through further standardization far outweigh any impingement upon command prerogatives. Policies don't command, people do. The commander's responsibility is to make the decision as to which resources are to be utilized in the completion of a mission within the constraints of the resources allocated to him. The reporting categories to which the commander must prescribe as they are directed by the Commandant will be extended to allow for the accumulation of costs of resource expenditures in the manner in which they must be reported.

The further centralization of cost accumulating and reporting methods will provide some definite advantages to the decentralized operating units of the Marine Coprs. The use of a further standardized JON will reduce the cross-reference processing at the local levels in order to provide Headquarters with the required reports. The procedure of accumulating costs in one mode and reporting them in another would be eliminated, with resulting savings in processing time, and in manpower utilization.

The further standardization of the JON will negate the requirement for retraining of fiscal/supply/maintenance personnel upon transfer to different duty stations. This will

result in increased knowledge of the systems operations and the efficiency with which it is employed. The time lag between when the individual reports for duty and the time he can be fully utilized in the position to which he is assigned will be brought to a minimum.

A further standardized JON will further eliminate the misunderstanding of essential data elements and their meanings between various levels of command. It is difficult at present to use terminology with which an individual is familiar when communicating with various units, as the terms may not necessarily be considered synonomous by the two units.

Possibly the greatest immediate disadvantage from using a further standardized JON is the necessity to change the unit systems that are now in operation. There will be a significant cost factor in changing systems that are operating, besides the personnel retraining that will be necessitated. However, this can be viewed as a one time program cost, which must be considered in relation to the long term benefits. In this vein, the amount of cost that will be incurred in the change over of systems will be the lessor of the two probabilities. The obvious benefits that can be obtained from the use of a further standardized JON system lend positive credence toward abatement of the one time cost considerations in view of continuing effectiveness and efficiency.

An immediate question that is raised whenever a change in systems is proposed, in business as well as in the military, is along the lines of anticipated organizational change. In this context, for the JON consideration, the question must be aligned also with the change in information accumulation and flow inherant in RMS and I^2S. The systems are to require more information to be gathered and reported. The increased information is an established requirement for the functioning of the Planning, Programming, Budgeting and Appraisal Systems.

> "Interestingly enough, much of the data seems to be available at the lower echelons of the three Military Departments, but the specific reporting systems for transmitting the data tothe higher command levels have not been established. For example, detailed information on maintenance and repair costs of many types of equipment, is kept at the installation level where such activities are performed. This is very useful for estimating current and future costs of the program elements containing such equipment, but this information is not now transmitted to higher command levels where programming data is assembled and summarized."[1]

To process the added information requirements the change, if any, appears to be additive and not subtractive. More personnel will be needed to obtain the information and put it into the format necessary for machine operations. No formal command organization changes are required as I now look at the proposed changes.

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[1]Bert Mogin, Director, Financial Management Education and Information, Office of the Assistant Secretary of Defense (Comptroller), in a lecture given to the Navy Graduate Financial Management Program, George Washington University, 2 November, 1966.

To accumulate the information that is to be required, severe changes will be necessitated in the JON composition. The eleven digits that are made available to commanders to use in the unit systems is where the change must occur. The requirements for Fund Code and Fiscal Year data will not be changed. The standardized items affecting the JON through RMS are the functional and sub-functional codes, elements of expense and the cost account codes.

When I initially began this study, interest was being focussed on the standardization of all digits of the JON. During the course of research the intent was changed to the obtaining of the information that is required while leaving a digit field available for use by unit commanders to add specific information that is required at that level. This approach permits more flexibility and also reduces the range of standardization efforts necessitated for the JON system. The purpose of the JON is still to satisfy the requisite cost accounting information requirements of higher echelons.

The use of the common categories of information is being established with the first phase of RMS, Project PRIME, on 1 July, 1967. A change in the JON structure by that date is not feasible, but ultimate use of categories for command management of resources and exterior reporting requirements is necessary and in the long run, must be the most efficient use of the resources committed to this type of activity.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The question of the need for further standardization of the JON is not a problem unto itself. It is engendered due to the changing environment within which the Marine Corps is operating, and must be resolved with due consideration to the external forces that are requiring other changes as well.

The awakening of Management to the capability of ADPE to process the voluminous flow of data in a minimum time frame, while compiling relevant information that is of value to managers for the decision making process will augument the present pressure for standarized data bases.

RMS and I^2S are just two of a growing number of systems within and without government that are being developed based on uniformity, the standarization of methods and procedures in an effort to become more efficient and effective in their operations. Such efforts are not all tied to the use of ADPE, though the capabilities available through its use may be the impetus for other efforts. Uniformity, or standarization of methods and procedures to be the benefit of people and organizations is now a sign of the times. The capabilities found within ADPE will maintain a constant pressure for utilization of the integrated of total systems concept, as managers and systems technicians attune their

thoughts to perceive the adaptability of functional activities to auromated processes.

Growing awareness of joint programs and problems is bringing about closer cooperation and constructive efforts between the separate services. On June 21 of last year, as "Agreement of Joint AMC/NMC/AFLC/AFSC Commanders Meetings,"[1] was signed formalizing the efforts of the commanders of major Development and Logistics agencies of the services in this endeavor. In the language of the agreement, the meetings are held "in recognition of the continuing need to resolve interagency problems, facilitate the exchange of information and accomplish joint studies and tasks"[2] pertinent to these four commands cutting across service lines. The agreement projects two broad objectives for its activities within the scope of the material/logistics field:

> "a. Prevent duplication among the services by joint utilization of personnel, intelligence, facilities, equipment, supplies and services in all cases where military effectiveness and economy of resources will thereby be increased.
>
> "b. Conform to uniform policies and standardize on material and logistic concepts, systems design, forms, terminology and criteria for the procurement, requisition, storage, transportation, distribution, issue and maintenance of weapon systems, supplies and equipment consistent with the specialized needs essential to the effective functioning of each command."[3]

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[1]James L. Trainor, Joint Meeting's Herald A New Management Force, Armed Forces Management, August, 1966, p 46.

[2]ibid, p 48.

[3]Loc cit.

RMS will, through its applied breadth, bring the services closer together in their procedures for accounting for the utilization of resources. This uniformity will evolve from the usage of EOB'S, and the consolidation of functional, sub-functional, cost code and expense element categories. The requirement of RMS are applied to all the departments within DOD, essentially, to assist managers in the effective and efficient use of resources allocated to them in relation to an approved plan costed in the EOB. To provide for the control of the systems as well as for evaluation of its effectiveness, prescribed categories have been established from which data is to be gathered by the managers in a manner consistent with the reporting requirements of the system proper. The financial system within I^2S will provide a means to accumulate and retain this same information as generated by the responsibility centers, cost centers, and sub-cost centers for use by the commander, the Commandant and his staff in satisfying the external reporting requirements of RMS in addition to the explicit needs of the Marine Corps.

The Marine Corps is actively expanding into the further use of ADPE, not only in the functional activity of financial accounting process. Computers are anticipated to provide information to field commanders on tactical consideration in the not to distant future.

> "We expect to have automatic data processing machines on the battlefield in 1985, releasing even more Marines for duty in the front lines. These machines will be light, portable, and accurate. By tightly integrated automation of supporting fires, and the extreme rapidity of response to front line requests, there will be a proportionate increase in effectiveness of fire control....I want to highlight this important fact: that management tools are applicable to tactical situations."[1]

For the expanding number of systems to handle the volume of inputs which will be generated, entry of data for processing will be facilitated by a uniform, standard format and procedures. This is especially relevant in the functional areas of financial accounting and supply. The differences apparent in MUMMS over its predecessors is an illustrative example: "it would be run by a new concentrated organizational structure; it would use modern mass storage, direct access computers; and it would operate with processes completely redesigned and uniform."[2]

The JON system now incorporated throughout the Marine Corps will not provide the data in the areas as directed by RMS without modification. The functional, sub-functional categories, cost codes and elements of expense determinations are not included in the current JON structure. To correct this deficiency will require further standardization of the JON. As more information is to be needed for the

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[1]Scot MacDonald, Data Processing Joins the Marine Corps For Battlefield Support, Armed Forces Management, March, 1967, pp 41-42.

[2]Major R. P. Walling, U. S. M. C., MUMMS the Word, Marine Corps Gazette, January, 1967, p 37.

operation of RMS and I^2S, correspondingly, more information must be reported.

The increased information will be generated in the responsibility centers within processes used to check on the utilization of allocated resources and their corresponding costs. The information demands of the developing systems are sufficiently more inclusive in relation to the present systems as to require more standardized inputs into the accounting system.

With the exception of the currently prescribed fund code and Fiscal Year designator systems, the current JON structure appears open to change. With the developing requirements to account for expenditures under EOB'S by functional, sub-functional, cost center and element of expense designators, the need is evident for their inclusion in the accounting process. The major effort in the accounting process is the JON, therefore, it is only natural that the change in the requirements be reflected in a change in the reporting medium; further standarization of the JON.

The multiple benefits that can be anticipated from the adoption of a further standardized JON are significant when viewed to the overall emphasis on the management of resources as examined through the compilation of financial costs that are aggregated against an approved EOB. The cost data will be accumulated by a JON system which must be more

standardized. As emphasized at the Resources Management Seminar held in Washington, D. C., March 6-9, 1967, the job order structure that is to be utilized must be designed to accrue costs from the cost center and sub-cost center level, and also, provide the financial details by functional and sub-functional categories, and expense elements as established by RMS.

The inefficient utilization of resources, men and machines, through duplicity and cross-referencing of unit systems to arrive at information required for higher echelon reports is open for reduction, as is the retraining cycles necessary to orient transferred personnel into the functioning unit systems. The data to be compiled by the JON is to be utilized more fully in the management control and review process. The cost data accumulated by JON'S will be used to check the actual performance against planned results, and establish the variances as they occur. EOB requests will be supported on the historical cost data compiled from Job Orders as modified by known charges for coming periods.

The financial accounting for the expenditure of resources under the programming and budgeting systems will assume greater importance than under any previous management system.

"Programming and budgeting systems will:

"1. Be correlated as fully as possible with each other and with management accounting systems, using common data elements and definitions, translatable structures and non-duplicative procedures and schedules.

> "2. Be organized so as to focus on the goals, purposes and outputs of the Department of Defense, and on the costs of achieving these goals."[1]

In order for the systems to assist commanders in the accomplishment of his mission, they must provide him with the information he needs when he requires it, in order to ensure that his assigned mission gets done well and at minimum cost. To obtain this cost data will be the job of the JON structure within the sphere of financial management's costs accounting processes.

The question of a requirement for further standardization of the JON system is a relevant one which has broad implications into the developing management system. With the scheduled onset of the first phase of RMS, Project PRIME, on 1 July of this year, the need is also current. The reason for the problem is evolutionary, caused by the rapidly expanding utilization of ADPE in management reporting and control processes. The precept behind RMS and I^2S is rooted in the increasing integration of ADPE into the total information system concept. Because of this evolution, the need has arisen for the further standardization of the JON system, and as a consequence of the development of the total information system theory, will dictate its accomplishment.

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[1]Department of Defense, Resource Management Systems of the Department of Defense, DOD Directive 7000.1, 22 August, 1966, p 3.

APPENDIX I

SUMMARIZED DEFINITIONS OF DOD DESIGNATED FUNCTIONAL CODES.[1]

The definitions of the functional codes have been abreviated to provide an overview of the breadth of each of the functional category codes. No effort is here purported to rigidly explicate those functional categories whose content appears to overlap and duplicate that of another category. It is to these functional accounts that cost accumulation procedures must comply.

1. Functional Codes A, B, & C (Mission Operations). Includes expenses incurred for direct accomplishment of the objective of a program element...

2. Functional Code D (Administration). Includes the expenses of general and administrative functions not performed as organic support of organizations covered by other functional categories...

3. Functional Code E (Supply Operations). Includes all functions performed by organic supply departments, except disposal, for which separate functional categories are established...

4. Functional Codes F and G (Maintenance of Material). Includes expenses for the maintenance of military material not

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[1]U. S. Department of the Navy, Financial Management of Resources, NAVSO P-3006, 12 December, 1966, pp 2-32ff.

charged to other functions...

5. Functional Code H (Disposal). Includes expenses incurred for the preparation for disposal, and the disposal of scrap, salvage, surplus and foreigh excess personal property and lumber and timber products; and direct reimbursements to working capital stock funds for obsolescence losses not included in standard prices of material...

6. Functional Code J (Medical Operations). Includes expenses for providing medical and dental care to civilian personnel and to military personnel and their dependents, and related functions...

7. Functional Code K (Overseas Dependent Education). Includes expenses incurred for education of minor dependents overseas. Includes expenses for maintenance of related property facilities.

8. Functional Code L (Base Service). Includes expense for miscellaneous base support functions (other than Public Works functions) not otherwise includes in other functional categories...

9. Functional Code M (Maintenance of Real Property). Includes expenses for the maintenance and repair of real property, except as otherwise included in other functional categories...

10. Functional Code N (Utility Operations). Includes the expenses for procurement of production and distribution of utilities...

11. Functional Code P (Other Engineering Support). Includes expenses for miscellaneous base support functions not otherwise included in other functional categories...

12. Functional Code R (Minor Construction). Includes expenses for the erection, installation, or assembly of a new real property facility; the addition, expansion, extension, alteration, conversion, or replacement of an existing real property facility; or the relocation of a real property facility from one installation to another...

APPENDIX II

SUB-FUNCTIONAL CATEGORY CODES APPLICABLE TO ADMINISTRATION (CODE D).[1]

Administration (Code D).

(1) Definition. Includes the expenses of general and administrative functions not performed as organic support of organizations covered by other functional categories. Includes expenses incurred for command, management, administration, intelligence, inspection, information legal, financial, welfare, religious and related functions. Includes expenses of automatic data processing when performed on a service center basis or when performed by a component of the organizations performing the foregoing general and administrative functions. Excludes expenses of administration within the Supply Department, Medical Department, or other departments included in other functional categories.

(2) Sub-Functional Category Codes

FIELD ACTIVITIES

D1 Administration, General

DZ Reimbursable Costs

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[1]U. S. Department of the Navy, Financial Management of Resources, NAVSO P-3006, 22 December, 1966, p 2-34 and 2-35.

DEPARTMENTAL AND CENTRALLY MANAGED PROGRAMS

D2 Departmental Administration

D3 Command Administration

D4 Contingencies - Congressional Travel

D5 Contingencies - Official Representation

D6 Contingencies - Extraordinary Military Expense

D7 Operation of Office of Legislative Assistance

D8 Petroleum Reserve

D9 Claims

DO Interdepartmental Activities

DA Defense Contract Audit Agency

DB Defense Attache System

DC Miscellaneous Administrative Costs

DD Undistributed Adjustments (For use by NAVCOMPT only)

DZ Reimbursable Costs

With sub-functional D1 and DZ use cost accounts for ADMINISTRATION. With sub-functional categories D2 to DZ use cost account 1111.

APPENDIX III

COST ACCOUNTS[1]

1. General. Cost accounts are established to classify transactions according to the purpose of transactions. Cost accounts will be used to identify uniformly the contents of management report requirements. When the activity does not use a job order system or other internal coding system, the cost account number may be inserted in the "Cost Code" part of the accounting classification structure. Appropriate Functional and Sub-Functional Categories are used in conjunction with cost accounts. The level of detail to be accumulated by the cost accounts prescribed herein will be determined by Expense Operating Budget Grantors except for specific requirements of Office of Secretary of Defense, Office of Navy Comptroller, and Command reporting.

2. COST ACCOUNT CODES.

a. General. The cost account codes are listed in subpars. b through m.

b. Unassigned. All sub-functional categories do not require an analysis of cost in detail. Those sub-functional

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[1]U. S. Department of the Navy, Financial Management of Resources, NAVSO P-3006, 22 December, 1966, pp 2-43 to 2-45.

categories not requiring any analysis of cost will use the following cost account(s).

COST ACCOUNT	DESCRIPTION
1111	General

c. Administration. Cost accounts prescribed herein are to be used to identify administrative costs under sub-functional categories D1 through DZ.

Sub-Function D1 and DZ

COST ACCOUNT	DESCRIPTION
1A00	COMMAND
1A10	Command and Executive Offices
1A20	Reception Office
1A30	Public Information Office
1A40	Legal Office
1A50	Chaplain's Office
1AX0	Military Absence
1B00	MANAGEMENT ENGINEERING/ INDUSTRIAL MANAGEMENT
1B10	Operations
1BX0	Military Absence
1C00	COMPTROLLER
1C10	Administration
1C20	Internal Review
1C30	Budget and Statistics

1C40	Accounting
1C50	Payroll
1C60	Financial Inventory Control
1C80	Disbursing
1CX0	Military Absence

COST ACCOUNT	DESCRIPTION
1D00	CIVILIAN MANPOWER MANAGEMENT
1D10	Administration
1D20	Employment
1D30	Wage and Classification
1D40	Employee Relations
1D50	Employee Services
1D60	Training
1D70	Safety
1DX0	Military Absence
1E00	MILITARY PERSONNEL MANAGEMENT
1E10	Administration
1E20	Officer Personnel Records
1E30	Enlisted Personnel Records
1E40	Training
1E50	Barracks and BOQ
1E60	First Lieutenant
1EX0	Military Absence

1F00	RESALE AND SPECIAL SERVICES SUPPORT
1F10	Commissary Store
1F20	Navy Exchange
1F30	Special Services
1F40	Other Nonappropriate Fund Activities
1FX0	Military Absence
1G00	INDUSTRIAL READINESS
1GX0	Military Absence
1H00	DATA PROCESSING
1H10	Administration
1H20	ADP Analysis and Programming
1H30	ADP Operations
1H40	Key Punch Operations
1H50	ADP Clerical Operations
1HX0	Military Absence
1J00	ADMINISTRATIVE OFFICE SERVICE
1J10	Printing and Reproduction
1JX0	Military Absence
1Z00	MISCELLANEOUS
1Z10	Incentive Awards
1Z20	Severance Pay
1Z30	Military Cost Variances

1Z40	Patent Office
1Z50	Navy Motion Picture Exchange
1Z60	Family Service Center

COST ACCOUNT	DESCRIPTION
1Z70	Retroactive Pay Increases
1Z80	Acquisition of Minor Property
1Z90	Acquisition of Class 3 Plant Property when chargeable to Operating Budget
1ZAo	Accrual & Payment of Leave & Fringe Benefits
1ZBO	Installation of Plant Property Class 3
1ZCO	Maintenance of Minor Property Class 3
1ZDO	Undistributed Expense
1ZXO	Military Absence

Sub-Functions D2 through DD

COST ACCOUNT	DESCRIPTION
1111	Departmental Administration and Centrally Managed Administrative Functions

APPENDIX IV

EXPENSE ELEMENTS[1]

1. GENERAL. Each expense identified to a functional category, sub-functional category cost center, and sub-cost center will also be identified to a specific expense element. The identification can be by means of a special code in the job order structure, by grouping of like documents (such as a material distribution), or through some other locally designed system.

2. DEFINITIONS

A. General. The expense elements with codes assigned for external reporting are defined in subpars. b through w.

B. Military Personnel (Code A). Includes the cost of the services of active forces military personnel, computed at the standard rates except the cost of trainees and unassigned personnel.

C. Military Trainees (Code B). Includes the standard rate cost of officers, cadets, midshipmen, and enlisted personnel (including recruits) undergoing PCS training at a service or civilian school, training center, industrial concern or similar organization, and who are assigned to

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[1]U. S. Department of the Navy, Financial Management of Resources, NAVSO P-3006, 22 December, 1966, pp 2-95 - 2-98.

student detachments. (For workload purpose, work units will include all students, regardless of source).

D. Military Personnel Unassigned (Code C). Includes the standard rate cost of patients, prisoners, and other military personnel not identifiable with a functional account and not otherwise accounted for, such as personnel AWOL or missing for 30 days or more and personnel awaiting separation or duty assignment regardless of where located.

E. Civilian Personnel (Code D). Includes the cost of the services of civilian personnel as defined for Bureau of the Budget Object Class 10 (Personal Services and Benefits). Includes personnel compensation, such as regular salaries and wages, additional compensation such as overtime pay, special and miscellaneous payment for personal services such as commissions and fees, and payments made to other agencies for services of employees or reimbursable detail; personal benefits such as allowances to employees and payments to other funds such as the retirement fund; and benefits for former personnel.

F. Travel and Personnel (Code E). Includes the cost of travel and transportation of personnel as defined for Bureau of the Budget Object Class 21 (Travel and Transportation of Persons). Includes transportation such as commercial transportation charges, rental of passenger carrying vehicles, mileage allowances and tolls; subsistence for travelers such

as per diem allowances; and incidental travel expenses such as baggage transfer and telephone expenses.

G. Transportation of Things - Military Airlift Command (Code F). Includes the cost of transportation of things as defined for Bureau of the Budget Object Class 22 (Transportation of Things) when shipment is made via Military Airlift Command.

H. Transportation of Things - Commercial Air (Code G). Includes the cost of transportation of things as defined for Bureau of the Budget Object Class ss (Transportation of Things) when shipment is made via commercial air. Excludes shipments made via commercial contract hire aircraft (QUICKTRANS).

I. Transportation of Things - Military Sea Transportation Service (Code H). Includes the cost of transportatio of things as defined for Bureau of the Budget Object Class 22 (Transportation of Things) when shipment is via MSTS.

J. Transportation of Things - Inland Transportation (Code J). Includes the cost of transportation of things as defined for Bureau of the Budget Object Class 22 (Transportation of Things) when inland shipment is via rail, truck, or other inland transportation.

K. Transportation of Things - QUICKTRANS (Code K). Includes the cost of transportation of things as defined for Bureau of the Budget Object Class 22 (Transportation of Things) when shipment is via commercial contract hire aircraft.

L. Transportation of Things - Other (Code L). Includes the cost of transportation of things as defined for Bureau of the Budget Object Class 22 (Transportation of Things) when shipment is not covered by one of the types of shipment described for element of expense codes F through K.

M. Utilities (Code M). Includes the cost of heat, light, power, water, gas, electricity and other utility services except transportation and communication services. This element of expense corresponds to the utilities services portion of Bureau of the Budget Object Class 23 (Rents, Communications, and Utilities).

N. Communications (Code N). Includes the cost of communications as defined for that portion of the Bureau of the Budget Object Class 23 identified as communications services. Includes charges for the transmission of messages from place to place, contractual telephone and teletype service, postage (other than parcel post), rental of post office boxes, and telephone installation charges.

O. Purchase Services - Overhauls (Code P). Includes costs of overhauls, restricted and technical availabilities of ships, overhauls and progressive aircraft, reworks (PAR'S) of aircraft and similar expenses incurred at depot level maintenance activities, in-house or commercial.

P. Purchased Services - Other (Code Q). Includes the cost of rents of land, structures and equipment (other than transportation equipment); contractual printing and reproduction such as work done on printing presses, lithographing and other duplicating related binding operations, photostating, blueprinting, photography, and microfilming;

other contractual services not otherwise classified such as repairs and alterations, storage and maintenance of vehicles, stenographic services, subsistence and support of persons, publication of notices, advertising and broadcast time, tuitions, insurance premiums, research and development, operation of facilities and other service contracts; and expense transfers and reimbursable charges for services performed by one activity for another. Corresponds to the "rents" portion of Bureau of the Budget Object Class 23, Object Class 24 (Printing and Reproduction) and Object Class 25 (Other Services).

Q. Aircraft POL (Code R). Includes the cost of fuel (including fuel additives) and lubricants consumed by aircraft in flight operations and maintenance.

R. Ship POL (Code S). Includes the cost of fuel and lubricants consumed by ships, service craft and other vessels.

S. Supplies (Code T). Includes the cost of all consumable items.

T. Statistical Charges Other Than Military (Code U). Includes the amount of consumable Appropriation Purchases Account (APA) material issued with a statistical charge against an expense operating budget.

U. Equipment (Code W). Includes the cost of all nonconsumable items meeting the "Expense" criteria in par. 301-2b.

V. Other Expense (Code X). Includes the cost of types of resources not otherwise provided for, such as investments and loans, grants subsidies and contributions, insurance claims and indemnities, interest and dividends, payments in lieu of taxes, and other insignificant cost., i. e., cost which do not exceed one tenth of one percent of the total activity budget, or $500, whichever is greater.

W. Service Credits (Code Y). This element of expense will be used to accumulate the credits for charges made to functional categories or program elements within the same entity. These credits decrease the expenses for the functional category or program element which earned the credit expenses, and they are to be contrasted with reimbursable transactions which do not decrease the expenses for the functional category or program element under which the expenses are accumulated. The purpose of this element is (1) to avoid the transfer of expenses by individual element of expense and (2) to provide visivility for both gross expenses incurred and net expenses of functional categories.

BIBLIOGRAPHY

Books

Albers, Henry H., Organized Executive Action. New York; John Wiley and Sons, Inc., 1963.

Chapin, Ned, An Introduction to Automatic Computers. Princeton, New Jersey: D. Van Nostrand Company, Inc., 1963.

Dauten, Paul M. Jr., (ed) Current Issues and Emerging Concepts in Management. Boston: Houghton Mifflin Co., 1962.

Gregory, Robert H., and Van Horn, Richard L., Automatic Data Processing Systems. Belmont, California: Wadsworth Publishing Company, Inc., 1965.

Hitch, Charles J., Decision Making For Defense, Berkley: 1965.

Hitch, Charles J., and McKean, Roland N., The Economics of Defense in the Nuclear Age. New York: Atheneum, 1965. (Originally Published by Harvard University Press, 1960).

Lazzaro, Victor. (ed) Systems and Procedures. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961.

Massie, Joseph L., Essentials of Management. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1964.

Schmidt, Richard N., and Meyers, William E., Electronic Business Data Processing. New York: Holt, Rinehart and Winston, 1963.

Van Ness, Robert G., Principles of Punched Card Data Processing. Elmhurst, Illinois: The Business Press, 1965.

Articles and Periodicals

Baldwin, Kenneth O., Integrated Data Gathering and Processing, Data Processing for Management, November, 1963, pp 29-31.

Brooks, Jack, Congressman, Texas, The Growing use of Electronic Data Processing in Government, The Armed Forces Comptroller, April, 1966 pp 19-20.

Deardon, John, Can Management Information be Automated?, Harvard Business Review, March-April, 1964, pp 128-135.

Deardon, John, Myth of Real-time Management Information, Harvard Business Review, May-June, 1966 pp 123-132.

Evans, Marshall K. and Hague, Lou R., Master Plan for Information Systems, Harvard Business Review, January-February, 1962.

Guest, L. C., Jr., Meeting the Challenge of "Info Systems", Financial Executive, August, 1966, 44ff.

Harrill, E. Reece, A Unified System of Governmental Accounts. The Federal Accountant, Winter, 1964 pp 4-39.

Leavitt, Harold J. and Whisler, Thomas L., Management in the 1980's, Harvard Business Review, November-December, 1958, pp 41-48.

MacDonald, Scot, The Navy Proposes Naval Material Command, Armed Forces Management, April, 1966, 40ff.

Merrill, Lt. Gen. J. G., Comptroller U. S. Air Force, How Project Firm Could Help Commanders, Armed Forces Management, April, 1966, 76ff.

Moravec, A. F., Basic Concepts for Planning Advanced EDP Systems, Management Services, July-August, 1965, pp 52-60.

Moravec, A. F., Basic Concepts for Designing a Fundamental Information System, Management Services, July-August, 1965, pp 37-45.

Thurston, Philip H., Who Should Control Information Systems?, Harvard Business Review, November-December, 1962, pp 135-139.

Trainor, James L., Joint Meetings Herald a New Management Forces, Armed Forces Management, August, 1966, 45ff.

Whisler, Thomas L., The Manager and The Computer, The Journal of Accountancy, January, 1965, pp 27-32.

U. S. Marine Corps Orders

U. S. Marine Corps, Marine Corps Operating Responsibilities Under the Defense Standardization Program, MCO 4120.5, 27 March, 1964.

_____. Marine Corps Purchasing Procedures, MCO 4200.10B, 7 June, 1961.

_____. Military Standard Requisitioning and Issue Procedures (MILSTRIP), MCO P4235.19A, 18 June, 1965.

_____. Marine Corps Unified Material Management System (MUMMS), MCO P4400.70, 28 June, 1966.

_____. Information Systems Design Section, Forces Headquarters Headquarters/Service Battalion, FMF, MCO 5200.9, 23 August, 1966.

_____. Marine Corps Integrated Information System (I^2S), MCO 5200.10, 23 August, 1966.

_____. International Standardization Programs: U. S. Marine Corps Implementation of, MCO 5711.1A, 8 January, 1962.

_____. Marine Corps Commanders and Financial Management Manual, MCO P7300.9A, 1 February, 1965.

_____. Fund Codes for Military Standard Requisitioning Procedure, MCO 7301.40, 11 January, 1963.

_____. Fund Codes for Fiscal Year 1967, MCO 7301.52A, 14 September, 1966.

_____. Marine Corps Data Processing Program, MCO 10462.3A, 13 July, 1966.

_____. Use of Automatic Data Processing Equipment (ADPE) for Financial and Related Operations, MCO 10462.4, 13 August, 1965.

_____. Manual for Planning and Programming, HQO P3121.2, 29 January, 1965.

_____. Techniques and Procedures Guide for Work Groups in the Determination of Information Systems Requirements, HQO P5200.7, 6 October, 1966.

_____. Marine Corps Integrated Information System (I^2S), HQO 5200.8, 6 October, 1966.

Addresses

Anthony, The Honorable Robert N., Assistant Secretary Of Defense (Comptroller), 1966 Navy Supply Conference, Harrisburg, Pennsylvania, 4 May, 1966.

Anthony, The Honorable Robert N., Assistant Secretary Of Defense (Comptroller), Defense Management Systems Course, Naval Postgraduate School, Monterey, California, 5 August, 1966.

Masterson, Rear Admiral Paul, Deputy Comptroller of the Navy, Resource Management Systems, Navy Graduate Financial Management Program, George Washington University, 1 March, 1967.

Sarnoff, David, The Social Impact of Computers, The American Bankers Association, National Automation Conference, New York World's Fair, 16 July, 1964.

Mogin, Bert, Director, Financial Management Education and Information, Office of the Assistant Secretary of Defense (Comptroller), Navy Graduate Financial Management Program, George Washington University, 2 November, 1966.

Other Sources

U. S. President, 1963- (L. B. Johnson). Memorandum to Heads of all Departments and Agencies, 24 May, 1966.

U. S. Commission on Organization of the Executive Branch of The Government, Budgeting and Accounting: A Report to The Congress, Government Printing Office, 1955, (Second Hoover Commission).

Department of Defense, Resource Management Systems of the Department of Defense, Number 7000.1, 22 August, 1966.

Department of Defense, A Primer on Project PRIME., A Report Prepared by the Department of Defense, Government Printing Office, November, 1966.

Department of the Navy, Report of CNO Resource Management Study, 28 November, 1966.

Department of the Navy, Financial Management of Resources, NAVSO P-3006, 22 December, 1966.

SecNav Instruction 5200.14, Management Information and Data System; Plans and Procedures for Coordination of, 3 November, 1965.

SecNav Notice 5200, Annual Guidance for the Preparation of Management Information Systems Plans and ADP Plan Supplements, 13 January, 1967.

Bureau of Naval Personnel, Financial Management in the Navy, NavPers 10792-A, March, 1962.

Marine Corps Institute, Budget Formulation and Execution, MCI 34.6b1, 2 July, 1965.

Navy Management Review, MARCORPS MUMMS: A Concept of Centralized Material Management, August, 1965, p 10.

News Front, Computers Come of Age, August, 1964.

MCB, Camp Pendleton, Phase 1, Comptroller Integrated Management Operation System, December, 1965.

U. S. Navy Resource Management Seminar-1967, Marriott Motel, Washington, D. C., 6 March, 1967.

Headquarters, U. S. Marine Corps, Integrated Information System Work Group for Financial; Approved Charter for, March, 1967.

Headquarters, U. S. Marine Corps, Personal Interviews, November-December, 1966, February-March, 1967.